

but this antagonism is much more evident in animals that do not die after a bacterial infection, i.e., animals which are immune.

If it were only possible to inject an insect more than once without producing fatal results, I am sure one could obtain still more interesting results. I have often made two trials but grasshoppers and caterpillars, at least, do not seem able to overcome the effects of a second injection.

#### SUMMARY.

1. Entomological text-books emphasize the importance of phagocytosis in ridding the insect body of foreign matter, but in reality insect blood cells are visibly rather passive.

2. Grasshopper and caterpillar blood cells do not seem to phagocytise bacteria in an amœboid fashion.

3. When bacteria are found within the blood cells, they may have gained entrance through their own aggression or physical factors may have been involved.

4. The blood of normal insects, however, is somewhat antagonistic towards bacteria.

5. This antagonism acts extracellularly.

6. Actively immunized grasshopper blood shows a high degree of antagonism towards the bacteria used in producing this immunity.

7. An agglutinin was found in immune grasshopper blood.

8. Some quantitative data on the bacteriacidal action of immune grasshopper blood were obtained.

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### LIPEURUS DOVEI *NOM. NOV.*

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It was recently brought to my attention by Dr. A. Hassall through Dr. L. O. Howard that in naming *Lipeurus lineatus*<sup>1</sup> I have used a preoccupied name.<sup>2</sup> Therefore, as a substitute for *L. lineatus* I propose, as above recorded, the name *L. dovei*, in honor of Mr. W. E. Dove of the Bureau of Entomology who has been instrumental in collecting several new and interesting species of Mallophaga.

<sup>1</sup> PSYCHE, Vol. 24, No. 4, p. 114, 1917.

<sup>2</sup> Zeitsch. f. Ges. Naturw., Vol. 28, p. 384, 1866.